

Iowa Department of Public Health



Falls in Iowa: County Deaths and Hospitalizations

Office of Disability, Injury & Violence Prevention, 2010-2014 Data

Division of Behavioral Health

January 2017

Suggested Citation:

Iowa Department of Public Health. Division of Behavioral Health. *Iowa Falls: County Deaths and Hospitalizations*. Des Moines: Iowa Dept. of Public Health, 2016. Website: <http://idph.iowa.gov/disability-injury-violence-prevention/injury-prevention>

Governor: Terry E. Branstad
Lieutenant Governor: Kim Reynolds
IDPH Director: Gerd W. Clabaugh
Division of Behavioral Director: Kathy Stone

Report Contact Information:

Binnie LeHew, MSW
Executive Officer 2
vivian.lehew@idph.iowa.gov
515-281-5032

Toby V. Yak, PhD, MPH
Lead Epidemiologist
toby.yak@idph.iowa.gov
515-281-8261

Website: <http://idph.iowa.gov/falls-prevention>

Acknowledgments

Josh Jungling
Management Analyst III
Iowa Department of Public Health

Louise Lex, PhD, MS
Health Planner
Iowa Department of Public Health

Carlene Russell
Nutrition Program Director
Iowa Department on Aging

Tim Wickam, MPH
Community Health Consultant
Iowa Department of Public Health

Table of Contents

List of Tables	ii
Magnitude of Fall-related Injuries among Older Adults in Iowa	1
Understanding Falls	1
The Impact of Falls in Iowa	1
Comparison of 2009-2013 and 2010-2014 Fall-Related Deaths Data	2
Conclusions	12
Data Sources	13
References	14

List of Tables

Table 1: Comparison of Iowa Fall-Related Data, 2010-2014	2
Table 2: County Fall-Related Deaths, Iowa, 2010-2014.....	3
Table 3: County Fall-Related Hospitalizations, Iowa, 2010-2014	6
Table 4: County Fall-Related Hospitalizations Charges, Iowa, 2010-2014.....	9

Magnitude of Fall-related Injuries among Older Adults in Iowa

Understanding Falls

Falls are one of the leading causes of injury hospitalization and deaths among Iowa older adults. A fall is an event which results in a person coming to rest unintentionally on the ground or floor or other lower level.¹ Millions of adults aged 65 and older fall each year in the United States alone.¹ One out of three older adults falls each year, but about half of those who fall never reported or discussed their falls with a health care provider.² Lifetime costs associated with unintentional fall injuries between 2010-2014 among Iowa residents ages 65 and older are estimated to be over \$3.5 billion. Most of these costs were associated with injuries requiring emergency department visits. Falls can cause moderate to severe injuries, such as hip fractures and traumatic head injuries, and have been shown to increase the risk of early death. Some risk factors that are associated with falls are lower body weakness, vitamin D deficiency, vision problems, and home hazards such as broken or uneven steps or no handrails along stairs.² Although falls are a serious public health issue, many falls are preventable.

The Impact of Falls in Iowa

In Iowa, between 2010 and 2014, there was a total of 141,635 deaths. Approximately 2,323 (15.1 deaths per 100,000 population) of these deaths were associated with falls. Of the total deaths from falls, nearly 201 deaths (6.5 deaths per 100,000 population) were among people between the ages of 50 and 64. People ages 65 and older had the highest total number of deaths, nearly 2,020 deaths (85.9 deaths per 100,000 population).

There was a total of 54,447 hospitalizations (3.59 hospitalizations per 1,000 population) due to falls between 2010 and 2014. The hospitalization rate for people ages 50 to 64 was 2.73 per 1,000 population and 17.24 per 1,000 population among people ages 65 and older. This indicates that people ages 65 and older had the highest rate of hospitalization compared to people ages 50 to 64. Between 2010 and 2014, among all 99

Highlights

- ✓ Nearly 1 out of 3 older adults fall each year, but half of those who fall never reported or discussed their falls.
- ✓ Between 2010-2014, lifetime costs associated with fall injuries among Iowans ages 65 and older were over \$3.5 billion.
- ✓ Falls risk factors includes lower body weakness, vitamin D deficiency, vision problem, and home hazards (broken or uneven steps or no handrails).
- ✓ In Iowa, between 2010-2014, hospitalization charges due to falls were about \$1.62 billion.
- ✓ Between 2010-2014, 141,635 deaths were recorded in Iowa, and approximately 2,323 of those deaths were associated with falls.

Iowa counties, Howard County had the lowest rate of hospitalizations for people ages 65 and older (3.24 per 1,000 population) due to falls compared to Van Buren County (the highest at 31.3 per 1,000 population).

In 2010-2014, hospitalization charges due to falls in Iowans were about \$1.62 billion. The average charge per hospitalization (for all ages) was \$29,847.86, which is 8 percent higher than in 2009-2013. Comparatively, the average charge for hospitalization due to falls for people ages 65 and older was \$28,486 (nearly 7 percent higher than in 2010-2013) versus \$35,585 (about 9 percent higher than in 2010-2013) for people ages 50 to 64. While the hospitalization rate for people ages 65 and older was six times greater than those ages 50 to 64, the average hospital charges were 20 percent lower than the average hospital charges for people ages 50 to 64 years old. Additional analysis is needed to understand the differences in average hospital charges. The data contained in this report were prepared using the Iowa Vital Records and the hospital discharge data. These data included fall-related cases that resulted in hospitalizations and deaths; therefore, the data presented in this report do not fully reflect the true magnitude of falls in Iowa.

Comparison of 2009-2013 and 2010-2014 Fall-Related Deaths Data

Table 1 illustrates the comparison of fall-related deaths, hospitalizations, and hospitalization charges. The 2010-2014 data showed a significant increase in fall-related hospitalization charges. Fall-related hospitalization charges increased 8 percent for both all ages and people ages 65 and older, and a 9 percent increase for people ages 50-64.

Table 1: Comparison of Iowa Fall-Related Data, 2010-2014

	2009-2013			2010-2014		
	All Ages	Ages 50-64	Ages 65+	All Ages	Ages 50-64	Ages 65+
Deaths (rate per 100,000 population)	14.6	6.0	84.3	15.1	6.5	85.9
Hospitalization (rate per 100,000 population)	3.5	2.6	17.4	3.6	2.7	17.2
Hospitalization Charges (average)	\$27,569	\$32,630	\$26,388	\$29,847	\$35,585	\$28,486

County Fall-Related Deaths

Table 2 shows the number and rate per 100,000 population of fall-related deaths in Iowa by county. Counties with the highest rate (42 – 46 deaths per 100,000 population) of fall-related deaths includes Johnson, Cerro Gordo, and Cass. Cedar, Fremont, Guthrie, Page, and Warren County had the lowest rate (< 3 fall-related deaths per 100,000 population) of fall-related deaths.

Table 2: County Fall-Related Deaths, Iowa, 2010-2014

County Fall-Related Deaths				
Geographic Description	All Ages Total Number	All Ages Rate per 100,000	Ages 50-64 Rate per 100,000	Ages 65+ Rate per 100,000
State	2,323	15.1	6.5	85.9
Adair	2	5.3	0.0	24.3
Adams	4	20.3	0.0	93.6
Allamakee	11	15.5	12.4	62.5
Appanoose	3	4.7	0.0	22.7
Audubon	6	20.2	0.0	71.0
Benton	12	9.3	3.6	48.0
Black Hawk	74	11.2	7.3	66.9
Boone	13	9.9	0.0	59.9
Bremer	4	3.3	0.0	18.3
Buchanan	8	7.6	4.6	42.3
Buena Vista	7	6.8	0.0	39.9
Butler	3	4.0	0.0	19.8
Calhoun	7	14.0	0.0	62.3
Carroll	11	10.6	0.0	51.5
Cass	29	42.4	6.5	193.1
Cedar	1	1.1	0.0	6.2
Cerro Gordo	98	44.9	15.8	215.4
Cherokee	13	21.7	0.0	99.4
Chickasaw	7	11.4	0.0	59.7
Clarke	2	4.3	0.0	25.4
Clay	19	22.9	5.5	114.6
Clayton	5	5.6	14.0	11.1
Clinton	20	8.2	3.8	40.2
Crawford	8	9.3	5.9	49.3
Dallas	11	3.0	1.7	23.8
Davis	4	9.2	11.7	40.1
Decatur	1	2.4	0.0	13.2

(table continues)

County Fall-Related Deaths				
Geographic Description	All Ages Total Number	All Ages Rate per 100,000	Ages 50-64 Rate per 100,000	Ages 65+ Rate per 100,000
Delaware	15	17.1	10.1	85.5
Des Moines	38	18.9	9.3	90.3
Dickinson	7	8.3	0.0	36.0
Dubuque	55	11.5	5.2	67.1
Emmet	7	14.0	0.0	73.2
Fayette	11	10.6	8.9	39.1
Floyd	11	13.6	0.0	66.9
Franklin	5	9.5	8.6	38.8
Fremont	0	0.0	0.0	0.0
Greene	7	15.2	19.0	51.5
Grundy	3	4.8	0.0	25.1
Guthrie	1	1.9	0.0	9.0
Hamilton	7	9.1	0.0	41.7
Hancock	9	16.1	0.0	83.3
Hardin	16	18.4	5.3	81.9
Harrison	8	11.0	6.0	44.9
Henry	7	7.0	0.0	35.5
Howard	5	10.5	0.0	54.1
Humboldt	7	14.4	0.0	70.7
Ida	3	8.5	0.0	13.4
Iowa	3	3.7	5.5	13.9
Jackson	3	3.1	0.0	10.6
Jasper	10	5.4	2.5	28.2
Jefferson	3	3.5	4.5	14.1
Johnson	318	46.5	33.4	411.1
Jones	9	8.7	4.4	38.1
Keokuk	3	5.8	8.6	19.6
Kossuth	12	15.6	0.0	71.0
Lee	27	15.2	9.9	66.5
Linn	159	14.8	4.4	98.4
Louisa	4	7.1	0.0	45.2
Lucas	4	9.1	0.0	44.6
Lyon	4	6.8	8.8	30.6
Madison	8	10.2	6.1	58.2
Mahaska	4	3.6	4.4	16.3
Marion	14	8.4	0.0	52.4
Marshall	51	24.9	2.4	136.7

(table continues)

County Fall-Related Deaths				
Geographic Description	All Ages Total Number	All Ages Rate per 100,000	Ages 50-64 Rate per 100,000	Ages 65+ Rate per 100,000
Mills	6	8.1	5.6	46.0
Mitchell	8	14.9	0.0	69.2
Monona	9	19.7	0.0	72.7
Monroe	5	12.5	0.0	66.7
Montgomery	4	7.6	0.0	37.2
Muscatine	16	7.5	0.0	52.0
Obrien	6	8.5	6.4	34.5
Osceola	2	6.4	0.0	0.0
Page	1	1.3	0.0	6.3
Palo Alto	5	10.8	0.0	40.7
Plymouth	6	4.8	0.0	28.2
Pocahontas	5	13.9	0.0	62.4
Polk	558	25.1	13.8	192.0
Pottawattamie	62	13.3	4.1	82.0
Poweshiek	9	9.6	0.0	50.9
Ringgold	3	11.8	0.0	48.8
Sac	1	2.0	0.0	8.8
Scott	116	13.8	4.1	90.2
Shelby	6	10.0	0.0	45.9
Sioux	11	6.4	0.0	44.9
Story	35	7.6	3.0	65.6
Tama	5	5.7	5.4	24.3
Taylor	2	6.4	0.0	31.0
Union	3	4.8	7.6	17.3
Van Buren	4	10.7	0.0	53.4
Wapello	6	3.4	2.7	17.0
Warren	3	1.3	2.1	6.0
Washington	5	4.6	0.0	25.7
Wayne	7	21.9	0.0	97.9
Webster	50	26.7	5.0	151.8
Winnebago	3	5.6	8.3	18.9
Winneshiek	8	7.6	0.0	38.5
Woodbury	95	18.5	16.6	97.5
Worth	3	7.9	0.0	41.6
Wright	14	21.5	0.0	94.6

County Fall-Related Hospitalizations

Table 3 shows the number and rate per 100,000 population of fall-related hospitalizations in Iowa by county. Counties with the highest rate (6 - 7 hospitalizations per 100,000 population) of fall-related hospitalizations include Calhoun, Ida, Van Buren, and Wayne. Allamakee, Emmet, Howard, Osceola, and Sioux County had the lowest rate (< 2 fall-related hospitalizations per 100,000 population) of fall-related hospitalizations.

Table 3: County Fall-Related Hospitalizations, Iowa, 2010-2014

Fall-Related Hospitalizations				
Geographic Description	All Ages Total Number	All Ages Rate per 1,000	Ages 50-64 Rate per 1,000	Ages 65+ Rate per 1,000
State of Iowa	54,447	3.6	2.7	17.2
Adair	85	2.27	1.67	7.35
Adams	67	3.42	1.08	13.25
Allamakee	119	1.69	0.50	7.13
Appanoose	364	5.77	3.22	21.99
Audubon	116	3.92	1.90	13.99
Benton	422	3.29	1.86	16.17
Black Hawk	2,108	3.27	2.80	16.33
Boone	534	4.10	2.07	19.35
Bremer	372	3.07	2.11	12.99
Buchanan	397	3.83	2.10	18.75
Buena Vista	263	2.59	1.30	14.54
Butler	293	3.95	2.09	15.27
Calhoun	336	6.90	3.49	24.87
Carroll	556	5.42	2.73	24.34
Cass	166	2.43	1.31	9.58
Cedar	368	4.04	2.15	18.46
Cerro Gordo	972	4.51	3.25	17.55
Cherokee	145	2.44	2.09	7.88
Chickasaw	140	2.28	1.07	8.80
Clarke	246	5.33	2.76	25.79
Clay	380	4.63	2.86	19.20
Clayton	267	3.01	1.83	11.33
Clinton	1,144	4.78	3.41	20.32
Crawford	211	2.46	1.25	12.37
Dallas	728	2.06	2.12	13.67
Davis	140	3.22	2.12	14.84
Decatur	128	3.13	2.55	12.95

(table continues)

Fall-Related Hospitalizations				
Geographic Description	All Ages Total Number	All Ages Rate per 1,000	Ages 50-64 Rate per 1,000	Ages 65+ Rate per 1,000
Delaware	239	2.73	1.76	11.98
Des Moines	1,178	5.97	3.93	23.76
Dickinson	289	3.45	1.77	12.11
Dubuque	2,060	4.39	3.51	19.99
Emmet	59	1.19	1.12	4.39
Fayette	267	2.60	2.99	8.69
Floyd	305	3.81	1.82	15.68
Franklin	171	3.26	1.19	13.94
Fremont	124	3.47	1.62	13.78
Greene	226	4.95	2.37	20.18
Grundy	238	3.87	1.65	16.32
Guthrie	242	4.52	2.54	17.56
Hamilton	407	5.34	3.10	22.97
Hancock	197	3.55	1.83	14.16
Hardin	466	5.40	2.60	21.09
Harrison	205	2.83	1.76	12.41
Henry	404	4.06	2.92	18.09
Howard	37	0.78	0.31	3.24
Humboldt	180	3.73	1.87	13.97
Ida	212	6.01	3.39	23.85
Iowa	329	4.07	3.10	17.29
Jackson	391	4.01	1.86	16.80
Jasper	805	4.43	2.41	20.26
Jefferson	465	5.58	3.42	26.02
Johnson	1,671	2.51	2.74	18.03
Jones	323	3.15	1.86	13.47
Keokuk	188	3.65	1.99	15.01
Kossuth	262	3.43	1.61	12.89
Lee	886	5.07	3.24	21.07
Linn	3,646	3.48	3.04	17.94
Louisa	204	3.64	3.22	16.32
Lucas	209	4.78	2.47	18.62
Lyon	62	1.07	0.18	5.93
Madison	217	2.80	2.40	11.97
Mahaska	422	3.80	2.15	17.92
Marion	434	2.63	2.12	12.21
Marshall	648	3.22	2.47	13.92

(table continues)

Fall-Related Hospitalizations				
Geographic Description	All Ages Total Count	All Ages Rate per 1,000	Ages 50-64 Rate per 1,000	Ages 65+ Rate per 1,000
Mills	198	2.68	2.08	12.67
Mitchell	204	3.82	1.81	15.38
Monona	189	4.17	2.42	13.95
Monroe	170	4.28	1.99	18.28
Montgomery	213	4.07	1.67	17.44
Muscatine	719	3.40	3.11	16.69
Obrien	156	2.22	0.77	8.91
Osceola	51	1.64	1.28	6.14
Page	161	2.07	0.93	8.35
Palo Alto	139	3.02	1.52	11.35
Plymouth	570	4.62	3.21	21.26
Pocahontas	145	4.07	1.28	15.99
Polk	6,870	3.17	3.23	18.26
Pottawattamie	1,748	3.82	2.77	18.49
Poweshiek	414	4.48	3.22	18.31
Ringgold	112	4.43	1.71	15.70
Sac	286	5.67	3.21	20.77
Scott	3,540	4.32	3.52	22.33
Shelby	252	4.22	2.59	15.53
Sioux	257	1.51	1.28	7.99
Story	1,290	2.87	2.73	20.31
Tama	327	3.81	2.50	15.36
Taylor	71	2.29	1.19	8.81
Union	174	2.80	2.22	10.98
Van Buren	277	7.46	3.46	31.39
Wapello	956	5.47	3.82	25.12
Warren	728	3.14	2.49	15.84
Washington	519	4.79	2.71	20.69
Wayne	202	6.39	2.40	23.77
Webster	841	4.57	3.17	20.70
Winnebago	194	3.68	2.82	13.89
Winneshiek	211	2.02	1.09	9.60
Woodbury	2,057	4.13	4.33	20.12
Worth	112	2.99	1.27	12.50
Wright	359	5.57	2.38	22.25

County Fall-Related Hospitalizations Charges

Table 4 shows the total charges and average charges for fall-related hospitalizations in Iowa by county. Counties with the highest fall-related hospitalizations charges include Calhoun, Ida, Van Buren, and Wayne. Allamakee, Emmet, Howard, Osceola, and Sioux County had the lowest rate (< 2 fall-related hospitalizations per 100,000 population) of fall-related hospitalizations.

Table 4: County Fall-Related Hospitalizations Charges, Iowa, 2010-2014

Fall-Related Hospitalization Charges				
Geographic Description	All Ages Total Charges	All Ages Average Charges	Ages 50-64 Average Charges	Ages 65+ Average Charges
State of Iowa	\$1,625,126,573.37	\$29,847.86	\$35,585.52	\$28,486.35
Adair	\$3,231,725.38	\$38,020.30	\$26,182.74	\$42,800.95
Adams	\$1,586,679.74	\$23,681.79	\$25,317.65	\$23,768.39
Allamakee	\$2,130,105.71	\$17,900.05	\$25,012.81	\$14,676.43
Appanoose	\$7,757,251.16	\$21,311.13	\$32,676.66	\$19,952.18
Audubon	\$2,891,400.13	\$24,925.86	\$24,153.02	\$25,404.09
Benton	\$12,868,732.85	\$30,494.63	\$34,593.34	\$28,921.67
Black Hawk	\$60,935,862.43	\$28,906.96	\$33,959.04	\$27,974.70
Boone	\$15,755,276.61	\$29,504.26	\$37,668.44	\$27,397.41
Bremer	\$11,329,826.08	\$30,456.52	\$40,673.82	\$28,136.85
Buchanan	\$11,287,901.29	\$28,433.00	\$28,417.92	\$28,076.22
Buena Vista	\$6,415,333.96	\$24,392.90	\$32,820.64	\$22,751.17
Butler	\$9,164,105.35	\$31,276.81	\$33,706.81	\$29,404.76
Calhoun	\$7,931,416.46	\$23,605.41	\$30,627.29	\$22,589.14
Carroll	\$11,660,665.36	\$20,972.42	\$24,812.83	\$20,152.67
Cass	\$3,633,543.52	\$21,888.82	\$25,216.89	\$21,606.81
Cedar	\$10,885,504.94	\$29,580.18	\$37,320.05	\$29,002.57
Cerro Gordo	\$25,488,327.59	\$26,222.56	\$28,320.90	\$26,326.93
Cherokee	\$4,970,063.57	\$34,276.30	\$33,582.34	\$34,646.90
Chickasaw	\$4,437,291.39	\$31,694.94	\$27,943.01	\$26,140.79
Clarke	\$5,607,471.92	\$22,794.60	\$26,011.02	\$22,100.42
Clay	\$9,290,319.96	\$24,448.21	\$22,445.65	\$24,665.00
Clayton	\$7,345,219.75	\$27,510.19	\$27,805.85	\$27,138.87
Clinton	\$35,667,885.00	\$31,178.22	\$34,345.89	\$30,070.95
Crawford	\$5,497,104.19	\$26,052.63	\$35,602.46	\$24,462.51
Dallas	\$28,668,110.95	\$39,379.27	\$47,202.45	\$38,348.18
Davis	\$3,897,604.01	\$27,840.03	\$24,152.38	\$29,131.17
Decatur	\$3,388,171.16	\$26,470.09	\$37,378.64	\$24,087.70

(table continues)

Fall-Related Hospitalization Charges				
Geographic Description	All Ages Total Charges	All Ages Average Charges	Ages 50-64 Average Charges	Ages 65+ Average Charges
Delaware	\$7,098,893.68	\$29,702.48	\$34,549.82	\$28,840.97
Des Moines	\$36,780,245.60	\$31,222.62	\$34,495.10	\$31,637.18
Dickinson	\$6,916,656.32	\$23,933.07	\$25,985.86	\$23,970.85
Dubuque	\$56,794,841.30	\$27,570.31	\$29,756.71	\$26,176.99
Emmet	\$1,267,182.81	\$21,477.67	\$21,061.05	\$22,555.86
Fayette	\$9,210,438.15	\$34,496.02	\$43,070.38	\$30,435.66
Floyd	\$6,549,228.07	\$21,472.88	\$31,163.81	\$20,713.48
Franklin	\$4,290,613.68	\$25,091.31	\$33,082.58	\$23,709.90
Fremont	\$3,129,580.29	\$25,238.55	\$23,160.30	\$24,309.86
Greene	\$5,934,957.28	\$26,260.87	\$37,484.28	\$24,607.05
Grundy	\$6,935,808.80	\$29,142.05	\$53,745.16	\$26,266.55
Guthrie	\$6,857,867.38	\$28,338.29	\$41,288.28	\$26,776.89
Hamilton	\$11,344,035.44	\$27,872.32	\$29,613.09	\$26,384.41
Hancock	\$4,535,360.87	\$23,022.14	\$20,665.66	\$22,709.04
Hardin	\$10,337,379.35	\$22,183.22	\$26,637.71	\$20,751.46
Harrison	\$5,255,895.04	\$25,638.51	\$25,349.52	\$25,650.65
Henry	\$11,867,775.87	\$29,375.68	\$33,455.88	\$28,833.47
Howard	\$637,654.03	\$17,233.89	\$9,457.69	\$17,579.05
Humboldt	\$5,878,882.89	\$32,660.46	\$52,478.64	\$31,253.84
Ida	\$5,010,727.92	\$23,635.51	\$25,133.46	\$23,687.82
Iowa	\$11,420,561.35	\$34,712.95	\$47,498.37	\$32,804.96
Jackson	\$10,985,252.66	\$28,095.28	\$29,352.61	\$27,066.19
Jasper	\$21,267,087.88	\$26,418.74	\$34,127.47	\$24,776.71
Jefferson	\$11,440,989.18	\$24,604.28	\$38,625.86	\$20,826.45
Johnson	\$54,537,002.09	\$32,637.34	\$38,620.98	\$30,903.63
Jones	\$11,091,186.19	\$34,338.04	\$41,986.15	\$31,202.91
Keokuk	\$6,175,079.13	\$32,846.17	\$43,640.84	\$30,445.95
Kossuth	\$4,751,181.60	\$18,134.28	\$24,763.27	\$17,190.51
Lee	\$23,133,576.16	\$26,110.13	\$33,371.87	\$24,374.85
Linn	\$114,091,213.41	\$31,292.16	\$34,173.15	\$30,623.21
Louisa	\$6,256,438.88	\$30,668.82	\$30,833.33	\$29,161.04
Lucas	\$5,154,160.78	\$24,661.06	\$38,684.33	\$20,284.12
Lyon	\$533,080.57	\$8,598.07	\$19,739.04	\$8,267.23
Madison	\$8,453,866.06	\$38,957.91	\$42,459.22	\$38,719.55
Mahaska	\$9,194,666.58	\$21,788.31	\$27,671.87	\$20,652.05
Marion	\$13,919,691.78	\$32,073.02	\$38,702.24	\$31,396.56
Marshall	\$21,116,239.35	\$32,586.79	\$35,091.81	\$29,873.09

(table continues)

Fall-Related Hospitalization Charges

Geographic Description	All Ages Total Charges	All Ages Average Charges	Ages 50-64 Average Charges	Ages 65+ Average Charges
Mills	\$6,569,604.82	\$33,179.82	\$30,135.95	\$35,158.76
Mitchell	\$2,853,347.69	\$13,987.00	\$13,377.76	\$13,906.09
Monona	\$4,740,901.42	\$25,084.13	\$27,954.86	\$24,699.63
Monroe	\$3,897,502.17	\$22,926.48	\$40,427.19	\$18,546.84
Montgomery	\$6,105,649.37	\$28,665.02	\$31,364.54	\$28,663.33
Muscatine	\$23,476,980.99	\$32,652.27	\$37,249.40	\$31,926.59
Obrien	\$3,704,265.99	\$23,745.29	\$27,186.74	\$24,023.71
Osceola	\$801,704.54	\$15,719.70	\$19,081.93	\$13,613.06
Page	\$3,312,846.09	\$20,576.68	\$20,865.94	\$20,668.47
Palo Alto	\$2,449,375.19	\$17,621.40	\$28,063.93	\$16,473.22
Plymouth	\$12,756,173.06	\$22,379.25	\$23,988.83	\$22,310.55
Pocahontas	\$2,590,241.36	\$17,863.73	\$26,745.20	\$15,986.17
Polk	\$264,384,043.59	\$38,483.85	\$45,743.09	\$37,347.75
Pottawattamie	\$53,999,450.30	\$30,892.13	\$34,898.59	\$31,287.46
Poweshiek	\$11,194,935.92	\$27,040.91	\$38,430.31	\$24,752.68
Ringgold	\$3,540,183.75	\$31,608.78	\$42,028.40	\$29,787.49
Sac	\$5,731,428.10	\$20,039.96	\$27,673.52	\$18,790.42
Scott	\$103,834,621.97	\$29,331.81	\$34,703.55	\$27,740.66
Shelby	\$5,227,570.23	\$20,744.33	\$18,567.45	\$20,899.97
Sioux	\$6,229,098.74	\$24,237.74	\$25,048.82	\$23,854.39
Story	\$38,686,743.40	\$29,989.72	\$32,706.20	\$29,529.76
Tama	\$10,757,293.56	\$32,896.92	\$42,873.27	\$31,643.77
Taylor	\$1,711,784.12	\$24,109.64	\$32,518.82	\$22,216.70
Union	\$5,953,031.34	\$34,212.82	\$48,639.23	\$31,176.73
Van Buren	\$6,654,234.29	\$24,022.51	\$35,930.67	\$20,925.90
Wapello	\$26,909,578.95	\$28,148.10	\$28,156.07	\$27,635.66
Warren	\$26,926,289.83	\$36,986.66	\$36,508.99	\$37,322.53
Washington	\$15,167,182.48	\$29,223.86	\$50,364.15	\$25,815.64
Wayne	\$3,982,575.86	\$19,715.72	\$21,346.69	\$19,011.38
Webster	\$25,979,194.11	\$30,890.84	\$34,184.27	\$30,163.37
Winnebago	\$5,051,211.15	\$26,037.17	\$28,268.71	\$24,318.53
Winneshek	\$3,145,777.01	\$14,908.90	\$18,149.85	\$13,981.11
Woodbury	\$60,845,506.40	\$29,579.73	\$32,607.29	\$29,868.62
Worth	\$3,256,002.12	\$29,071.45	\$23,328.87	\$28,748.01
Wright	\$8,822,044.58	\$24,573.94	\$40,593.72	\$22,132.11

Conclusions

Falls among older adults are a major public health problem, with an average 404 deaths among Iowans over the age of 65 and an average of 40 deaths among people aged 50 to 64 years annually. Falls contribute to the rising medical charges experienced by many older adults in Iowa. In Iowa, the average fall-related hospitalization charges for adults 50 to 64 years old was \$35,585 for 2010-2014 compared to the average hospital charges for all ages (\$29,847). To reduce falls in Iowa, efforts at the local level need to focus on adults ages 50 and older who are especially prone to falls. It is imperative to recognize that nearly half of falls are underreported and that falls are preventable. Both the death data and hospitalization data do not include falls that were not reported, thus, leaving us unable to adjust the rates of falls accordingly within this population.

Data Sources

Vital Records: [Iowa Department of Public Health](#)

Hospital Discharge Data: [Iowa Department of Public Health](#)

References

1. World Health Organization. Violence and injury prevention, n.d.
http://www.who.int/violence_injury_prevention/other_injury/falls/en/; (Accessed Nov. 19, 2014).
2. Centers for Disease Control and prevention. Falls among adults: An overview, 2014.
<http://www.cdc.gov/homeandrecreationalsafety/falls/adultfalls.html>; (Accessed Nov. 19, 2014).